REMARKS

Claims 1-22 are pending in the present Application. By this Reply, no claims have been cancelled and no new claims have been added. Accordingly, claims 1-22 are currently at issue.

I. Rejections Under 35 U.S.C. § 112

In the Office Action, claims 1-18 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. More specifically, the Examiner asserts, "The original specification neither mentions applying the brazing alloy as a single coating nor it was shown or described in such a way as to reasonably convey 'single coating' to one skilled in the relevant art." Applicant disagrees, and respectfully submits that the use of a single coating is both expressly and inherently present in the embodiments disclosed by the present specification. The specification does not disclose any additional layers on the core alloy other than the cladding/brazing alloy. Thus, one skilled in the art would interpret this disclosure to mean that a particular face of the core alloy has only a single coating of the cladding/brazing alloy. Applicant submits herewith the Declaration of Sylvain Henry under 37 C.F.R. § 1.132, supporting and explaining that one skilled in the art would recognize the specification to disclose these features. Thus, Applicant respectfully requests reconsideration and withdrawal of this rejection in light of the Declaration.

Applicant notes that the term "single coating" in claims 1 and 14 does not imply a particular *method or technique* of coating the cladding/brazing alloy onto the core alloy. Rather, the term "single coating," as used in claims 1 and 14, simply means that the coating is the *only coating present* on the particular face(s) of the core alloy.

II. Rejections Under 35 U.S.C. § 103

In the Office Action, claims 1-6, 8-12, and 14-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,863,669 to Miller ("Miller") in view of U.S. Patent Application Publication No. 2003/0155409 to Dockus et al. ("Dockus"). Additionally, claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Miller and Dockus, in view of

U.S. Patent No. 4,929,511 to Bye et al. ("Bye"). Further, claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Miller and Dockus, in view of U.S. Patent No. 6,234,377 to Teshima et al. ("Teshima"). Applicant respectfully traverses these rejections.

A. Claims 1-6, 8-12, and 21-22

Claim 1 includes, among other elements, "an aluminum brazing alloy coated as a single coating on at least one face of the core alloy … including 4% to 15% of silicon and 0.01% to 0.5% of at least one element selected from the group consisting of Ag, Be, Bi, Ce, La, Pb, Pd, Sb, Y or mischmetal." As stated in the previous Response, the Examiner is incorrect that it would be obvious to arrive at the claimed invention from combining Dockus and Miller. Applicant restates that Dockus only discloses brazing material that has an additional "braze-promoting layer" along with a brazing clad layer, and this braze-promoting layer is an essential element of the brazing sheet used in Dockus. Thus, the teachings of Dockus are only applicable to methods that utilize brazing sheets of that type, and one skilled in the art, upon reading Dockus, would not apply its teachings to a brazing sheet that did not include a braze-promoting layer. As described below, the Examiner's arguments against this are based on an incorrect interpretation of Dockus.

The Examiner is incorrect in asserting (at P. 13) that "Dockus discloses [at Par. 42-43] a brazing sheet product which does NOT include braze-promoting layer 4." On the contrary, the alloy in Par. 42-43 of Dockus clearly includes a nickel-based braze-promoting layer (3), and instead, is "devoid of … a bonding layer." Applicant notes that Par. 43 recites the layer (3) is located "on the outer surface of one or both said clad layer or layers," and that Dockus' most preferred braze-promoting layer is nickel-based (See Par. 141), the same as the layer (3) in Par. 43. Thus, it is clear that this layer (3) is a braze-promoting layer, despite the fact that Dockus does not use the words "braze-promoting layer" in describing it. Furthermore, the alloy of Par. 42-43 clearly contains multiple layers coated on the same face of the core layer, in contrast to the brazing plates used in the method of claim 1.

Additionally, the Examiner is incorrect (at P. 12) in asserting, "Dockus discloses the aluminum clad layer including alloying elements such as Bi, Pb, or Sb, and such does not involve any braze-promoting layer." Dockus discloses that the use of Bi, Pb, Sb, etc. into the

clad layer is done to make the braze promoting layer more pure, to make the plating of the braze-promoting layer "less complex." (See Par. 112). In other words, the only reason that Dockus used Bi, Pb, or Sb in the clad layer was to make it easier and cheaper to use the braze-promoting layer. Thus, the teachings of Dockus are not applicable to any brazing sheet that does not contain a braze-promoting layer.

Applicant notes that Dockus devotes only five (5) paragraphs to the description of the core layer (Par. 91-95) and only nineteen (19) paragraphs to the description of the clad layer (Par. 97-115), but devotes **seventy-one (71)** paragraphs to the description of the braze-promoting layer (Par. 140-210), almost three times the space devoted to the core and clad layers combined. Additionally, every claim in Dockus includes the braze-promoting layer as an element. Clearly, the braze-promoting layer is critical to any and all brazing sheets and methods disclosed by Dockus, contrary to the Examiner's assertions.

Further, Applicant points out that claims 1-6, 8-12, and 21-22 are method claims, not product/alloy claims. As a result, specific methods used in Dockus and Miller are of greater relevance to the present invention. The use of the braze-promoting layer is extremely important in the methods described in Dockus. Miller, on the other hand, only discloses a sheet for methods of use in Nocolok or vacuum brazing, and not for fluxless controlled atmosphere brazing. Thus, Dockus cannot be properly combined with Miller, as proposed by the Examiner, to create a brazing material for fluxless brazing that does not include an additional braze-promoting layer.

Applicant respectfully submits that Dockus cannot be combined with Miller unless the teachings of Dockus are completely ignored, except for portions that are selectively picked out for the sole purpose of proving Applicant's invention obvious. Accordingly, no *prima facie* case of obviousness exists with respect to claim 1.

Claims 2-6, 8-12, and 21-22 depend from claim 1 and include all the elements of claim 1. Thus, for the reasons stated above with respect to claim 1, no *prima facie* case of obviousness exists with respect to claims 2-6, 8-12, and 21-22.

B. Claim 7

Claim 7, via dependency from claim 1, includes the element, "an aluminum brazing alloy coated as a single coating on at least one face of the core alloy … including 4% to 15% of silicon and 0.01% to 0.5% of at least one element selected from the group consisting of Ag, Be, Bi, Ce, La, Pb, Pd, Sb, Y or mischmetal." As described above with respect to claim 1, the proposed combination of Miller and Dockus does not render claim 1 obvious. The addition of Bye does not remedy the deficiencies in the rejection of claim 1. Thus, no *prima facie* case of obviousness exists with respect to claim 7.

C. Claim 13

Claim 13, via dependency from claim 1, includes the element, "an aluminum brazing alloy coated as a single coating on at least one face of the core alloy … including 4% to 15% of silicon and 0.01% to 0.5% of at least one element selected from the group consisting of Ag, Be, Bi, Ce, La, Pb, Pd, Sb, Y or mischmetal." As described above with respect to claim 1, the proposed combination of Miller and Dockus does not render claim 1 obvious. The addition of Teshima does not remedy the deficiencies in the rejection of claim 1. Thus, no *prima facie* case of obviousness exists with respect to claim 13.

D. Claims 14-18

Claim 14 includes, among other elements, "coating one or more plates with a single coating consisting of a cladding alloy comprising between 4% to 15% by weight silicon and 0.01% to 0.5% by weight of at least one element selected from the group consisting of Ag, Be, Bi, Ce, La, Pb, Pd, Sb, Y or mischmetal," and, "subjecting the one or more plates to fluxless brazing under controlled nitrogen and/or argon atmosphere at a temperature of between 580°C and 620°C." For the same reasons stated above with respect to claim 1, no *prima facie* case of obviousness exists with respect to claim 14.

Claims 15-18 depend from claim 14 and include all the elements of claim 14. Thus, for the same reasons stated above with respect to claim 14, Dockus cannot anticipate claims 16-18.

E. Claims 19-20

Claims 19 and 20 both recite, among other elements, "an aluminum brazing alloy coating at least one face of the core alloy, wherein the brazing alloy occupies an entire thickness between the core alloy and a respective outer surface of the brazing sheet, the brazing alloy comprising (% by weight): 4% to 15% of silicon and 0.01% to 0.5% of at least one element selected from the group consisting of Ag, Be, Bi, Ce, La, Pb, Pd, Sb, Y or mischmetal." Accordingly, claims 19 and 20 exclude any brazing material that contains an additional braze-promoting layer with the brazing clad. As described above with respect to claim 1, the teachings of Dockus are only applicable to brazing materials that include a core, a clad layer, and an additional braze-promoting layer. Thus, for the same reasons stated above with respect to claim 1, no *prima facie* case of obviousness exists with respect to claims 19-20.

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration of the Examiner's rejections and allowance of claims 1-22 in the present Application. Applicant submits that the Application is in condition for allowance and respectfully requests an early notice of the same.

Respectfully submitted,

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